

ABSTRACT OF THE DISCLOSURE

Burst transmissions in a burst-type communication system include a preamble synchronization sequence which allows detection and synchronization a burst transmission while at the same time providing information to a receiver, for example, on the subsequent burst payload data. Each burst transmission includes a preamble synchronization sequence which is one of a plurality of predetermined allowed preamble sequences in the system, according to the information desired to be transmitted. The system may also use differential encoding and decoding to eliminate the effects of frequency uncertainty. In that case, the allowed preamble sequences may be such that, after differential decoding, they differ from one another only by a polarity inversion such that a single matched filter may be used to detect two preamble sequences.